

S. Devi

1641

PAGE: 1

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/044,696**DATE: 01/15/99
TIME: 13:06:12**INPUT SET: S30786.raw**

This Raw Listing contains the General Information Section and up to the first 5 pages.

1

SEQUENCE LISTING

2

3 (1) General Information:

4

5 (i) APPLICANT: BARCHFELD, GAIL
6 DEL GIUDICE, GIUSEPPE
7 RAPPOLI, RINO

8

9 (ii) TITLE OF INVENTION: DETOXIFIED MUTANTS OF BACTERIAL
10 ADP-RIBOSYLATING TOXINS AS PARENTERAL ADJUVANTS

11

12 (iii) NUMBER OF SEQUENCES: 4

13

14 (iv) CORRESPONDENCE ADDRESS:

15 (A) ADDRESSEE: CHIRON CORPORATION, INTELLECTUAL PROPERTY -
16 R440
17 (B) STREET: P.O. BOX 8097
18 (C) CITY: EMERYVILLE
19 (D) STATE: CALIFORNIA
20 (E) COUNTRY: USA
21 (F) ZIP: 94662-8097

22

23 (v) COMPUTER READABLE FORM:

24 (A) MEDIUM TYPE: Floppy disk
25 (B) COMPUTER: IBM PC compatible
26 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
27 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

28

29 (vi) CURRENT APPLICATION DATA:

30 (A) APPLICATION NUMBER: US 09/044,696
31 (B) FILING DATE: 18-MAR-1998
32 (C) CLASSIFICATION:

33

34 (vii) PRIOR APPLICATION DATA:

35 (A) APPLICATION NUMBER: US 60/041,227
36 (B) FILING DATE: 21-MAR-1997

37

38 (viii) ATTORNEY/AGENT INFORMATION:

39 (A) NAME: HARBIN, ALISA A.
40 (B) REGISTRATION NUMBER: 33,895
41 (C) REFERENCE/DOCKET NUMBER: 1393.002

42

43 (ix) TELECOMMUNICATION INFORMATION:

44 (A) TELEPHONE: (510) 655-8730
45 (B) TELEFAX: (510) 655-3542

46

ENTERED

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/044,696**

DATE: 01/15/99
TIME: 13:06:13

INPUT SET: S30786.raw

```

47
48 (2) INFORMATION FOR SEQ ID NO:1:
49
50     (i) SEQUENCE CHARACTERISTICS:
51         (A) LENGTH: 711 base pairs
52         (B) TYPE: nucleic acid
53         (C) STRANDEDNESS: single
54         (D) TOPOLOGY: linear
55
56     (ii) MOLECULE TYPE: DNA (genomic)
57
58
59     (ix) FEATURE:
60         (A) NAME/KEY: CDS
61         (B) LOCATION: 1..708
62
63
64     (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
65
66 AAT GGC GAC AGA TTA TAC CGT GCT GAC TCT AGA CCC CCA GAT GAA ATA      48
67 Asn Gly Asp Arg Leu Tyr Arg Ala Asp Ser Arg Pro Pro Asp Glu Ile
68     1           5           10          15
69
70 AAA CGT TTC CCG AGT CTT ATG CCC AGA GGT AAT GAG TAC TTC GAT AGA      96
71 Lys Arg Phe Arg Ser Leu Met Pro Arg Gly Asn Glu Tyr Phe Asp Arg
72     20          25          30
73
74 GGA ACT CAA ATG AAT ATT AAT CTT TAT GAT CAC GCG AGA GGA ACA CAA      144
75 Gly Thr Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr Gln
76     35          40          45
77
78 ACC GGC TTT GTC AGA TAT GAT GAC GGA TAT GTT TCC ACT TCT CTT AGT      192
79 Thr Gly Phe Val Arg Tyr Asp Asp Gly Tyr Val Ser Thr Ser Leu Ser
80     50          55          60
81
82 TTG AGA AGT GCT CAC TTA GCA GGA CAG TAT ATA TTA TCA GGA TAT TCA      240
83 Leu Arg Ser Ala His Leu Ala Gly Gln Tyr Ile Leu Ser Gly Tyr Ser
84     65          70          75          80
85
86 CTT ACT ATA TAT ATC GTT ATA GCA AAT ATG TTT AAT GTT AAT GAT GTA      288
87 Leu Thr Ile Tyr Ile Val Ile Ala Asn Met Phe Asn Val Asn Asp Val
88     85          90          95
89
90 ATT AGC GTA TAC AGC CCT CAC CCA TAT GAA CAG GAG GTT TCT GCG TTA      336
91 Ile Ser Val Tyr Ser Pro His Pro Tyr Glu Gln Glu Val Ser Ala Leu
92     100         105         110
93
94 GGT GGA ATA CCA TAT TCT CAG ATA TAT GGA TGG TAT CGT GTT AAT TTT      384
95 Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr Arg Val Asn Phe
96     115         120         125
97
98 GGT GTG ATT GAT GAA CGA TTA CAT CGT AAC AGG GAA TAT AGA GAC CGG      432
99 Gly Val Ile Asp Glu Arg Leu His Arg Asn Arg Glu Tyr Arg Asp Arg

```

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/044,696**

 DATE: 01/15/99
 TIME: 13:06:14
INPUT SET: S30786.raw

100	130	135	140	
101				
102	TAT TAC AGA AAT CTG AAT ATA GCT CCG GCA GAG GAT GGT TAC AGA TTA			480
103	Tyr Tyr Arg Asn Leu Asn Ile Ala Pro Ala Glu Asp Gly Tyr Arg Leu			
104	145	150	155	160
105				
106	GCA GGT TTC CCA CCG GAT CAC CAA GCT TGG AGA GAA GAA CCC TGG ATT			528
107	Ala Gly Phe Pro Pro Asp His Gln Ala Trp Arg Glu Glu Pro Trp Ile			
108	165	170	175	
109				
110	CAT CAT GCA CCA CAA GGT TGT GGA GAT TCA TCA AGA ACA ATC ACA GGT			576
111	His His Ala Pro Gln Gly Cys Gly Asp Ser Ser Arg Thr Ile Thr Gly			
112	180	185	190	
113				
114	GAT ACT TGT AAT GAG GAG ACC CAG AAT CTG AGC ACA ATA TAT CTC AGG			624
115	Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu Arg			
116	195	200	205	
117				
118	GAA TAT CAA TCA AAA GTT AAG AGG CAG ATA TTT TCA GAC TAT CAG TCA			672
119	Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser Asp Tyr Gln Ser			
120	210	215	220	
121				
122	GAG GTT GAC ATA TAT AAC AGA ATT CGG GAT GAA TTA TGA			711
123	Glu Val Asp Ile Tyr Asn Arg Ile Arg Asp Glu Leu			
124	225	230	235	
125				
126				
127	(2) INFORMATION FOR SEQ ID NO:2:			
128				
129	(i) SEQUENCE CHARACTERISTICS:			
130	(A) LENGTH: 236 amino acids			
131	(B) TYPE: amino acid			
132	(D) TOPOLOGY: linear			
133				
134	(ii) MOLECULE TYPE: protein			
135				
136	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:			
137				
138	Asn Gly Asp Arg Leu Tyr Arg Ala Asp Ser Arg Pro Pro Asp Glu Ile			
139	1	5	10	15
140				
141	Lys Arg Phe Arg Ser Leu Met Pro Arg Gly Asn Glu Tyr Phe Asp Arg			
142	20	25	30	
143				
144	Gly Thr Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr Gln			
145	35	40	45	
146				
147	Thr Gly Phe Val Arg Tyr Asp Asp Gly Tyr Val Ser Thr Ser Leu Ser			
148	50	55	60	
149				
150	Leu Arg Ser Ala His Leu Ala Gly Gln Tyr Ile Leu Ser Gly Tyr Ser			
151	65	70	75	80
152				

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/044,696**DATE: 01/15/99
TIME: 13:06:15**INPUT SET: S30786.raw**

153 Leu Thr Ile Tyr Ile Val Ile Ala Asn Met Phe Asn Val Asn Asp Val
154 85 90 95
155
156 Ile Ser Val Tyr Ser Pro His Pro Tyr Glu Gln Glu Val Ser Ala Leu
157 100 105 110
158
159 Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr Arg Val Asn Phe
160 115 120 125
161
162 Gly Val Ile Asp Glu Arg Leu His Arg Asn Arg Glu Tyr Arg Asp Arg
163 130 135 140
164
165 Tyr Tyr Arg Asn Leu Asn Ile Ala Pro Ala Glu Asp Gly Tyr Arg Leu
166 145 150 155 160
167
168 Ala Gly Phe Pro Pro Asp His Gln Ala Trp Arg Glu Glu Pro Trp Ile
169 165 170 175
170
171 His His Ala Pro Gln Gly Cys Gly Asp Ser Ser Arg Thr Ile Thr Gly
172 180 185 190
173
174 Asp Thr Cys Asn Glu Glu Thr Gln Asn Leu Ser Thr Ile Tyr Leu Arg
175 195 200 205
176
177 Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser Asp Tyr Gln Ser
178 210 215 220
179
180 Glu Val Asp Ile Tyr Asn Arg Ile Arg Asp Glu Leu
181 225 230 235
182
183 (2) INFORMATION FOR SEQ ID NO:3:
184
185 (i) SEQUENCE CHARACTERISTICS:
186 (A) LENGTH: 723 base pairs
187 (B) TYPE: nucleic acid
188 (C) STRANDEDNESS: single
189 (D) TOPOLOGY: linear
190
191 (ii) MOLECULE TYPE: DNA (genomic)
192
193
194 (ix) FEATURE:
195 (A) NAME/KEY: misc_feature
196 (B) LOCATION: 1..720
197
198 (ix) FEATURE:
199 (A) NAME/KEY: CDS
200 (B) LOCATION: 1..720
201
202
203 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
204

205 AAT GAT GAT AAG TTA TAT CGG GCA GAT TCT AGA CCT CCT GAT GAA ATA

**RAW SEQUENCE LISTING
PATENT APPLICATION US/09/044,696**

 DATE: 01/15/99
 TIME: 13:06:15
INPUT SET: S30786.raw

206	Asn Asp Asp Lys Leu Tyr Arg Ala Asp Ser Arg Pro Pro Asp Glu Ile			
207	240	245	250	
208				
209	AAG CAG TCA GGT GGT CTT ATG CCA AGA GGA CAG AGT GAG TAC TTT GAC	96		
210	Lys Gln Ser Gly Gly Leu Met Pro Arg Gly Gln Ser Glu Tyr Phe Asp			
211	255	260	265	
212				
213	CGA GGT ACT CAA ATG AAT ATC AAC CTT TAT GAT CAT GCA AGA GGA ACT	144		
214	Arg Gly Thr Gln Met Asn Ile Asn Leu Tyr Asp His Ala Arg Gly Thr			
215	270	275	280	
216				
217	CAG ACG GGA TTT GTT AGG CAC GAT GAT GGA TAT GTT TCC ACC TCA ATT	192		
218	Gln Thr Gly Phe Val Arg His Asp Asp Gly Tyr Val Ser Thr Ser Ile			
219	285	290	295	300
220				
221	AGT TTG AGA AGT GCC CAC TTA GTG GGT CAA ACT ATA TTG TCT GGT CAT	240		
222	Ser Leu Arg Ser Ala His Leu Val Gly Gln Thr Ile Leu Ser Gly His			
223	305	310	315	
224				
225	TCT ACT TAT ATA TAT GTT ATA GCC ACT GCA CCC AAC ATG TTT AAC	288		
226	Ser Thr Tyr Tyr Ile Tyr Val Ile Ala Thr Ala Pro Asn Met Phe Asn			
227	320	325	330	
228				
229	GTT AAT GAT GTA TTA GGG GCA TAC AGT CCT CAT CCA GAT GAA CAA GAA	336		
230	Val Asn Asp Val Leu Gly Ala Tyr Ser Pro His Pro Asp Glu Gln Glu			
231	335	340	345	
232				
233	GTT TCT GCT TTA GGT GGG ATT CCA TAC TCC CAA ATA TAT GGA TGG TAT	384		
234	Val Ser Ala Leu Gly Gly Ile Pro Tyr Ser Gln Ile Tyr Gly Trp Tyr			
235	350	355	360	
236				
237	CGA GTT CAT TTT GGG GTG CTT GAT GAA CAA TTA CAT CGT AAT AGG GGC	432		
238	Arg Val His Phe Gly Val Leu Asp Glu Gln Leu His Arg Asn Arg Gly			
239	365	370	375	380
240				
241	TAC AGA GAT AGA TAT TAC AGT AAC TTA GAT ATT GCT CCA GCA GCA GAT	480		
242	Tyr Arg Asp Arg Tyr Tyr Ser Asn Leu Asp Ile Ala Pro Ala Ala Asp			
243	385	390	395	
244				
245	GGT TAT GGA TTG GCA GGT TTC CCT CCG GAG CAT AGA GCT TGG AGG GAA	528		
246	Gly Tyr Gly Leu Ala Gly Phe Pro Pro Glu His Arg Ala Trp Arg Glu			
247	400	405	410	
248				
249	GAG CCG TGG ATT CAT CAT GCA CCG CCG GGT TGT GGG AAT GCT CCA AGA	576		
250	Glu Pro Trp Ile His His Ala Pro Pro Gly Cys Gly Asn Ala Pro Arg			
251	415	420	425	
252				
253	TCA TCG ATC AGT AAT ACT TGC GAT GAA AAA ACC CAA AGT CTA GGT GTA	624		
254	Ser Ser Ile Ser Asn Thr Cys Asp Glu Lys Thr Gln Ser Leu Gly Val			
255	430	435	440	
256				
257	AAA TTC CTT GAC GAA TAC CAA TCT AAA GTT AAA AGA CAA ATA TTT TCA	672		
258	Lys Phe Leu Asp Glu Tyr Gln Ser Lys Val Lys Arg Gln Ile Phe Ser			

PAGE: 1

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION **US/09/044,696**

DATE: 01/15/99
TIME: 13:06:16

INPUT SET: S30786.raw

Line

Error

Original Text